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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,333	03/26/2001	Yatin R. Acharya	F0691	6324

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HARRITY SNYDER, LLP
11350 Randon Hills Road
SUITE 600
FAIRFAX, VA 22030

EXAMINER

WONG, BLANCHE

ART UNIT PAPER NUMBER

2616

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,333

Applicant(s)

ACHARYA ET AL.

Examiner

Blanche Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 8-11 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-11, 14-17, 19 is/are rejected.
- 7) ☒ Claim(s) 8, 13, 18 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The allowability of claims 14-10 are withdrawn.
2. The objections of claim 7 and 12 are withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-3,9,10,14,17,19** are rejected under 35 U.S.C. 102(e) as being anticipated by Ma et al. (U.S. Pat No. 6,798,743).

With regard to claim 1, Ma discloses

a plurality of input ports (**multiple input interfaces 701, col. 9, ln. 30; see also input interfaces 1 to M in Fig. 7**) configured to receive a plurality of data frames (**data link frame, col. 9, ln. 45**), each of the received data frames specifying at least one of a plurality of classes of service (**particular QoS level, col. 9, ln. 35**);

a memory (**queued, col. 9, ln. 32; dequeued, col. 9, ln. 44**) configured to store priority level information (**associated priority level, col.11, ln. 14**) corresponding to each of the plurality of classes of service (**classification, col. 9, ln. 47; see also**

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classification, col. 11, ln. 13), wherein the memory includes one of a plurality of registers or a lookup table (**Routing Table look-up, col. 9, ln. 62**); and

an action generator (**any data structure including queues**)(**the intermediate data structure 814 may be any data structure suitable for storing and retrieving packets, col. 11, ln. 61-62**) configured to generate an action tag (**the priority value of a packet as an index, col. 12, ln. 22**) for each of the received data frames, wherein the action generator includes:

an action memory (**storing**)(**it is Examiner's position that storing would require some memory**) configured to store a plurality of entries;

a decoder (**index**)(**it is Examiner's position that an index is used to retrieve an entry within the data structure**) configured to identify one of the entries in the action memory in response to the received data frames, and

a tag generator configured to generate the action tags (**index**) based on the identified entries; and

a port vector queue (**any data structure including queues**)(**the intermediate data structure 814 may be any data structure suitable for storing and retrieving packets, col. 11, ln. 61-62**) from the action generator for each of the received data frames to access the memory to identify the priority level information associated with the received data frame.

With regard to cl. 2, Ma further discloses a plurality of priority queues associated with each of a plurality of output ports of the network device (**QoS output queuing structure 710, col. 9, ln. 64**).

With regard to cl. 3, Ma further discloses the port vector queue is further configured to identify one of the priority queues for each of the received data frames based on the identified priority level information (**the priority value of a packet as an index, col. 12, ln. 22**).

With regard to claim 9, see analysis for claim 1.

With regard to claim 10, see analysis for claim 3.

With regard to claim 14, see analysis for claim 1.

With regard to claim 17, Ma further discloses a memory that stores a lookup table (**Routing Table look-up, col. 9, ln. 62**).

With regard to claim 19, Ma further discloses a port filter configured to apply policy rules (**delay-sensitive if its associated priority level is at least priority P or higher, col. 11, ln. 37**) to the data frames to identify one or more policy equations

(delay-sensitive and not delay-sensitive, col. 11, ln. 45) corresponding to the data frames.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 4,11,15,16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma in view of Lefebvre et al. (Pub No. US 2002/0118691 A1).

With regard to claim 4, Ma discloses the system of claim 1. However, Ma fails to explicitly show a memory that is preprogrammed with the priority level information.

In an analogous art, Lefebvre discloses a memory that is preprogrammed with the priority level information **(Each of the distinct queue priority ... a memory register storing the corresponding associated priority value ... , para. [0043])**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a memory that is preprogrammed with the priority level information in Ma's packet prioritization processing technique. The suggestion/motivation for doing so would have been to provide for prioritized data transmission. Lefebvre, para. [0004]. Therefore, it would have been obvious to combine Lefebvre with Ma, for the benefit of a memory that is preprogrammed with the

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priority level information for prioritized data transmission, to obtain the invention as specified in claim 4.

With regard to claim 11, Ma discloses method of claim 9. However, Ma fails to explicitly show a memory that includes a plurality of registers.

In an analogous art, Lefebvre discloses a memory that includes a plurality of registers (**priority values stored in memory registers, para. [0043]**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a memory that includes a plurality of registers in Ma's packet prioritization processing technique. The suggestion/motivation for doing so would have been to provide for prioritized data transmission. Lefebvre, para. [0004]. Therefore, it would have been obvious to combine Lefebvre with Ma, for the benefit of a memory that includes a plurality of registers for prioritized data transmission, to obtain the invention as specified in claim 11.

With regard to claim 15, see analysis for claim 4.

With regard to claim 16, see analysis for claim 11.

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Allowable Subject Matter

7. Claims 8,13,18,20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

BW
April 17, 2006


HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600